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REMARKS - General

With respect to the examiner's remark (2) in the Office Letter mailed 15 September 2003, applicant has canceled the abstract filed with the original application and has provided a new abstract herein.

With respect to the examiner's remarks (3) and (4) in the Office Letter mailed 15 September 2003, the examiner has rejected claims 1-4, 8-9, 17-18 under 35 U.S.C. 102(b) as being anticipated by Dancy et al. (US Patent 4,385,920). The applicant acknowledges the examiner's 35 U.S.C. 102(b) rejections of these claims and the basis thereof. The applicant has canceled claims 2-4, 6-8, 13, 16, and 53-54 and has re-written claims 1, 5, 9-12 and 14-15 so as to properly define and patentably distinguish the subject matter of the present invention from the prior art cited by the examiner.

Independent claim 1 has been re-written with the limitation that the solid-chemical composition is "ammonium- and urea-free," and that the composition is intended "...for the anaerobic bioremediation of chemical contaminants in the environment coupled to the biological process of denitrification...." The basis for these limitations of claim 1, as amended herein, is provided in page 14, 2nd paragraph of the inventor's specification. In remark (6) on page 4, 2nd paragraph of the Examiner's office action, the Examiner states that the reference to Dancy et al "does not teach ammonia-free [or ammonium-free] nitrogen, the chelating agent or the clay." Accordingly, as previously acknowledged by the examiner, the applicant's limitation of the composition of claim 1 as "ammonium-free," as amended herein, is not taught or anticipated from Dancy et al. Furthermore, Dancy et al. make no disclosures about "anaerobic bioremediation" or "the biological process of denitrification" as it pertains to anaerobic bioremediation. Hence, it is clear that the applicant's limitations of claim 1 herein pertaining to "anaerobic bioremediation" or "the biological process of denitrification" are not anticipated by Dancy et al.

Based on the foregoing, the applicant respectfully requests the examiner's removal of the 35 U.S.C. 102(b) rejection of claim 1 as amended herein. As claims 5, 9, and 17-18 are dependent upon claim 1, by removal of the basis for the 35 U.S.C. 102(b) rejection of claim 1 as amended herein, the examiner's 35 U.S.C. 102(b) rejections of these dependent claims would be rendered moot. Hence, the applicant respectfully requests the examiner's removal of the 35 U.S.C. 102(b) rejections to claims 1, 5, and 17-18.

In preparation of this response to the examiner's office 9/15/03 office action, it has come to the applicant's attention that claim 54 should not have been included in the claims of Group I but rather it should have been included in the claims of Group II (i.e., claims drawn to slow-release chemical composition; see Examiner's office letter dated 3/21/03). Accordingly, claim 54 is canceled herein and the applicant requests that the examiner append claim 54 to the claims of group II for examination at a later date.

With respect to the examiner's remarks (5) and (6) in the Office Letter mailed 15 September 2003, claims 1-18, 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dancy et al in view of Van Hijfte et al (USP #4,500,336), Moore (USP #6,120,574), McCullough et al (USP # 3,912,802), and Jackson, Jr. (USP #4,055,974).

The applicant first calls attention to the points made above concerning the Examiner's remarks (3) and (4) and re-iterates the revisions and deletions of the subject claims as incorporated herein. In particular, the applicant notes that in remark (6), the Examiner acknowledges that the reference to Dancy et al "does not teach ammonia-free [or ammonium-free] nitrogen...." Moreover, in review of Dancy et al and the other art references cited by the examiner, it is clear that the compositions disclosed in these references commonly include urea compounds, ammonium compounds and/or the use of anhydrous ammonium in the manufacturing process. Accordingly, by the applicant's limitation of the composition of claim 1 as "ammonium- and urea-free," as previously acknowledged by the examiner, the composition of claim 1, as Amendment A: Ser. No. 09/873,576

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amended herein, would not be obvious from Dancy et al. alone or in view of the other references cited by the examiner. The advantages of an ammonium- and urea-free composition for anaerobic bioremediation coupled to the process of denitrification, in accordance with the subject matter of claim 1 as amended herein, is discussed in the inventor's specification (page 14, 2nd paragraph).

Second, with respect to the examiner's rejections under 35 U.S.C. 103(a), it is important to note that the field of the present invention, i.e., "anaerobic bioremediation" as per the limitations to claim 1 as revised herein, appears to be a distinctly different and non-analogous field of art relative to Dancy et al. and the other references cited by the examiner. Accordingly, in further view of the applicant's prior arguments to traverse the examiner's 35 U.S.C. 103(a) rejections of the subject claims, it would not be obvious to a person skilled in the art of the subject invention to consult the references cited by the examiner to derive the inventor's "ammonium- and urea-free" composition for "anaerobic bioremediation," particularly when the references of Dancy et al, Van Hijfte et al, Moore, McCullough et al, and Jackson, Jr. make no disclosures concerning anaerobic bioremediation, let alone more specific disclosures concerning the denitrification process and the advantages of ammonium- and urea-free compositions for promoting denitrification-based anaerobic bioremediation. Furthermore, even among persons skilled in the art of the subject invention, it is often that ammonium (in particular) accumulates as a byproduct of dissimilatory nitrate reduction under anaerobic conditions, such that there is little benefit to adding ammonium. Moreover, given recent scientific findings concerning the process of anaerobic ammonium oxidation, the addition of ammonium may lead to the consumption of nitrates or their reduced intermediates, such that ammonium addition could be detrimental for the stated purpose of the subject invention. Hence, the composition of claim 1 provides non-obvious advantages relative to the prior art.

Based on the foregoing, it is clear that the subject matter of claim 1 as amended herein would not be obvious from Dancy et al in view of the other referenced cited by the examiner.

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Accordingly, the applicant respectfully requests the examiner's removal of the 35 U.S.C. 103(a) rejection of claim 1. As the revised claims 5, 9-12, 14-15 and 17-18 are dependent upon claim 1, in the allowance of claim 1 as amended herein, the examiner's 35 U.S.C. 103(a) rejections of these dependent claims would be rendered moot. Hence, the applicant respectfully requests the examiner's removal of the 35 U.S.C. 103(a) rejections to claims 1, 5, 9-12, 14-15 and 17-18 and the allowance of these claims as amended herein.

Conditional Request for Constructive Assistance

Applicant has amended this application so as to define a subject matter that is novel and unobvious. If, for any reason, this application is not believed to be in full condition for allowance, applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. §2173.02 and §707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,

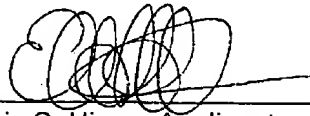


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15 December 2003



Eric C. Hince, Applicant